

VOROB'YEV, G.M.; KOTOVA, L.I.

Determining the texture of transformer steel. Zav. lab. 30  
no.10:1224-1227 '64. (MIRA 18:4)

1. Dnepropetrovskiy metallurgicheskiy institut.

S/148/60/000/003/010/018  
A161/A029

AUTHOR: Vorob'yev, G.M.

TITLE: Investigation of the Fine Structure of Fe - Cr Alloys in Deformation

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. - Chernaya metallurgiya,  
1960, No. 3, pp. 100 - 105

TEXT: Information is given on an investigation of the effect of plastic deformation of Fe-Cr alloys: variations of II-order distortions, of the mean size of the areas of coherent dissipation of X-rays, of III-order distortions, of the quantity of matter not participating in the diffraction of X-rays. The specimens contained 0.913; 2.01; 3.92; 6.05, and 8.08% Cr. Data of other investigations were utilized (Refs. 1-8). X-ray photographs were made with a YPC-50 M (URS-50 I) ionization camera in Fe-radiation. The following conclusions were drawn: 1) Fractioning of mosaic blocks takes place in compression of Fe-Cr alloy specimens, and the mean size of the blocks measured by the line width diminishes with increasing deformation up to 20% deformation and stays nearly constant at a deformation degree increasing above 20%; the minimum mean size of coherent X-ray dissipation areas in deformation is lower in alloys with higher Cr content. 2) Distortions of II order increase through the investigated deformation interval

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S/148/60/000/003/010/018  
A161/A029

Investigation of the Fine Structure of Fe - Cr Alloys in Deformation

from 0 to 80%;  $\frac{\Delta\alpha}{\alpha}$  values are higher in alloys with high Cr concentration. 3) Distortions of III order in annealed Fe-Cr alloys increase with increasing Cr concentration; in lower alloyed metal the III-order distortions are higher than in alloys with high Cr content. 4) The percentage of matter not participating in diffraction of X-rays is higher (at equal deformation degrees) in higher alloyed metal and increases with increasing degree of deformation. There are 4 figures and 8 references: 7 Soviet, 1 English.

ASSOCIATION: Dnepropetrovskiy gosudarstvennyy universitet (Dnepropetrovsk State University)

SUBMITTED: February 27, 1959

Card 2/2

VOROB'YEV, G.M.

Measuring the interference intensity of deformed metals. Fiz.  
met. i metalloved. 16 no.2:285-291 Ag '63. (MIRA 16:8)

1. Dnepropetrovskiy gosudarstvennyy universitet.  
(Iron alloys--Metallography)  
(Deformations (Mechanics))

GRECHNYY, Ya.V.; VOROB'YEV, G.M.; SHMYREV, I.P.

Determining the degree of texturization of transformer steel.  
Zav.lab. 30 no.3:305-306 '64. (MIRA 17:4)

1. Dnepropetrovskiy metallurgicheskiy institut.

CHUYKO, N.M.; GRECHNYI, Ya.V.; GALITSKIY, Yu.P.; SHMYREV, I.P.; VOROB'YEV, G.M.

Annealing of transformer steel in high vacuum and at high  
temperatures. Izv. vys. ucheb. zav.; chern. met. 7 no.10:  
49-54 '64. (MIRA 17:11)

1. Dnepropetrovskiy metallurgicheskiy institut.

18(7)

AUTHOR:

Vorob'yev, G. M.

SOV/48-23-5-13/31

TITLE:

Investigation of the Fine Structure of Fe-Si Alloys on Deformation (Izucheniye tonkoy struktury splavov Fe-Si pri deformatsii)

PERIODICAL:

Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol 23, Nr 5, pp 601-605 (USSR)

ABSTRACT:

The first part of the present paper is an analysis of the factors exerting an influence upon the intensity of the interference lines on deformation. The intensity of primary interference lines increases with rising degree of deformation. Therefore, the effect of extinction must be taken into account for the determination of tensions of the 3rd kind. As is shown in the papers (Refs 1, 2, 3) it is possible to compute the extinction with the formula (1) given here. If tensions of the 3rd kind occur, this formula receives the form of formula (3). The latter then goes over to the form (4) developed by B. M. Rovinskiy. The tensions of the 3rd kind may be computed from the equation thus obtained. The second part of the paper describes the materials, experimental methods, and the sample preparations. The third part gives the experimental results in

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Investigation of the Fine Structure of Fe-Si Alloys  
on Deformation

SOV/48-23-5-13/31

diagrams. The dependence of microhardness on the degree of deformation is given first; it exhibits an increase with rising deformation. The mean grain size of the structure decreases with rising deformation, the tensions of the 3rd kind increase with rising deformation; likewise, the percentage of the substance, which is not involved in the X-ray diffraction, also increases (Fig 4). There are 4 figures, 1 table, and 13 references, 7 of which are Soviet.

ASSOCIATION: Dnepropetrovskiy gos. universitet  
(Dnepropetrovsk State University)

Card 2/2



24 (2)

AUTHOR:

Vorob'yev, G. M.

SOV/32-25-5-38/56

TITLE:

Determination of the Parameters of the Crystal Lattice From Blurred Interference Lines (Opredeleniye parametrov kristallicheskoy reshetki po razmytym interferentsionnym liniyam)

PERIODICAL:

Zavodskaya Laboratoriya, 1959, Vol 25, Nr 5, p 619 (USSR)

ABSTRACT:

In connection with the investigation of tensions of the first order, of the concentration of the second component in solid solutions, and the plotting of the curve of solubility it is often necessary to measure the crystal lattice parameters of materials the interference lines of which are blurred. Thus, a shift of the maximum occurs which must be taken into account by a correction. The fixation of this correction was explained in the paper of D. M. Vasil'yev; it is, however, possible to avoid the approximations mentioned in this connection. In the present case this is done in a more precise and simpler way. This problem is solved by the solution of a system of three equations with three unknown quantities which are obtained by differentiation and integration of the function of distribution of the intensity of the doublet line and by plotting the co-

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Determination of the Parameters of the Crystal  
Lattice From Blurred Interference Lines

SOV/32-25-5-38/56

ordinates of the maximum of the curve. The system of the equations (2),(3),(4) is graphically solved (Fig). There are 1 figure and 1 Soviet reference.

ASSOCIATION: Dnepropetrovskiy gosudarstvennyy universitet (Dnepropetrovsk State University)

Card 2/2

S/137/61/000/001/030/043  
A006/A001

Translation from: Referativnyy zhurnal, Metallurgiya, 1961, No. 1, p. 30,  
# 1Zh226

AUTHORS: Vorob'yev, G.M., Kurilekh, D.G.

TITLE: Study of Changes in Mosaic Domains and Distortions of II Order in  
Fe-Ni and Fe-Co Alloys

PERIODICAL: "Byul. nauchno-tekhn. inform. Ukr. n.-i. trubn. in-t", 1959, No. 6-  
7, pp. 157 - 161

TEXT: The magnitude of distortions of the II order  $\Delta a/a$  and the dimen-  
sions of the zone of coherent dispersion, depending on the degree of deformation,  
alloys were determined in Fe-Ni (2-12 at % Ni) and Fe-Co (0.8-6% Co) from the  
width of roentgen diffraction lines (110) and (220), obtained from Fe-radiation  
and recorded on a YPC-50 (URS-50) device. The alloys were preliminarily deform-  
ed by 30% and annealed at 650°C; they were then subjected to static compression  
by 1.3 - 53%. It was found that during the deformation process the domains were  
crushed up to a certain limit, definite for each alloy, whereby the crushing of  
domains ceased when a deformation of 12-20% had been attained. For alloys with Ni  
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S/137/61/000/001/030/043  
A006/A001

Study of Changes in Mosaic Domains and Distortions of II Order in Fe-Ni and Fe-Co Alloys

the limit dimension of domains is the smaller the higher the Ni concentration; in the case of Fe-Co a lower degree of refinement was shown by alloys with a higher hardness in the initial state. It is assumed that the presence of a limit of domain crushing is connected with the partial recrystallization of the material in the volume of domains, which proceeds on account of heat liberated in the micro-volumes during the deformation process. The author points to the different nature of changes in the magnitude of  $\Delta a/a$  during the initial deformation stage, depending on the type of the alloy extension diagram: in the presence of a flow area, a very slight increase of  $\Delta a/a$  was observed at a degree of deformation increased to 5%; in the absence of such a flow area, however, such a compression entailed a sharp increase in  $\Delta a/a$ . In Fe-Ni distortions of the II order were higher in alloys with a greater Ni content, at equal degrees of deformation.

A. B.

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

20011;

S/137/61/000/002/033/016  
A006/A001

18.7510 1454,1555

Translation from: Referativnyy zhurnal, Metallurgiya. 1961, No. 2, p. 38 # 2Zh  
274

AUTHOR: Vorob'yev, G. M., Kurilekh, D. G.

TITLE: Investigation of Changes in the Magnitude of Mosaic Domains and Distortions of the II Order in Fe-Si and Fe-Cr Alloys During Plastic Deformation

PERIODICAL: "Byul. nauchno-tekhn. inform. Ukr. n. i. trubn. in-t", 1959, No. 6  
-7 pp. 161-165

TEXT: The width of X-ray diffraction lines (110) and (220) obtained from Fe-emission by recording on a YPC -50M (URS-50I) device, was employed to determine the magnitude of distortions of the II order  $\Delta a/a$  and the dimensions of areas of coherent dispersion, depending on the degree of deformation in Fe-Si (2-10.7 at. % Si) and Fe-Cr (1-8.5 at. % Cr) alloys. The specimens were deformed by 30% and annealed at 650°C; they were then subjected to static compression at deformation degrees ranging from 1.5 to 60%. During deformation process the domains were crushed to a certain limit; the limit size of the domains was the

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20014

S/137/51/000/002/033/046  
A006/A001

Investigation of Changes in the Magnitude of Mosaic Domains and Distortions of the II Order in Fe-Si and Fe-Cr Alloys During Plastic Deformation

smaller the higher the concentration of the alloying element in the alloy: the crushing of domains ceased prior to attaining a deformation degree of 15-20%; for alloys with 10.75% Si a decrease in the dimensions of domains was observed until failure of specimen (degree of deformation: 41.5%). It was established that at equal degrees of deformation in alloys with a higher concentration of Si and Cr, higher stresses of the II order arose. The authors point to the dependence of the change nature of  $\Delta a/a$  at the initial deformation stage on the ductility of alloys. There are 5 references.

A. B.

Translator's note: This is the full translation of the original Russian abstract.

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VOROB'YEV, G.M.

Determination of pole figures by means of a Geiger counter.  
(MIRA 17:8)  
Zav. lab. 30 no.6:716-718 '64

1. Dnepropetrovskiy gosudarstvennyy universitet.

VOROB'YEV, G.M... inzh.

Analysis of changes in intensity and width of X-ray interference  
bands of Fe-Co alloys under the effect of deformation. Izv.vys.  
ucheb.zav.; chern.met. 2 no.9:101 S '59. (MIRA 13:4)

1. Dnepropetrovskiy gosudarstvennyy universiteta.  
(Iron-cobalt alloys--Metallography) (X rays--Diffraction)



VOROB'YEV, G.M.

Studying the fine crystal structure of Fe-Cr alloys under the  
effect of deformation. Izv.vys.ucheb.zav.; chern.mat. no.3:  
100-105 '60. (MIRA 13:4)

1. Dnepropetrovskiy gosudarstvennyy universitet.  
(Iron-chromium alloys--Metallography)  
(Crystal lattices)

*Vorob'yev, G.M.*  
ALEKSEYEV, N.S.; BELIATEV, A.P.; BUGAREV, L.A.; BUTOMO, D.G.; VASIL'YEV, Z.V.;  
VERIGIN, V.N.; VOROB'YEV, G.M.; GAYLIT, A.A.; GOL'SHTEYN, P.M.;  
GOKHSHEYN, M.B.; ZHOLOBOV, V.V.; ZEDIN, N.H.; IVANOV-SKOBLIKOV, N.I.;  
KOTEPOV, Ya.V.; LANDIKHOV, A.D.; MARAYEV, S.Ye.; MILLER, L.Ye.;  
OL'KHOV, N.P.; PERLIN, I.L.; POSTNIKOV, N.H.; ROZOV, M.H.; CHERNYAK, S.H.;  
CHUPRAKOV, V.Ya.; TSENER, Ya.A.

Vladimir Oskarovich Gagen-Torn; obituary. TSvet.met. 27 no.5:67-68  
S-0 '54. (MIRA 10:10)

(Gagen-Torn, Vladimir Oskarovich, 1888-1954)

SCV/137-58-7-15909

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 7, p 282 (USSR)

AUTHORS: ~~Vorob'yev~~, G. M., Kharlamova, N. V.

TITLE: Mechanical Properties of Al-Zn-Mg-Cu Alloys in Relation to the Concentration of the Components (Mekhanicheskiye svoystva splavov Al-Zn-Mg-Cu v zavisimosti ot kontsentratsii komponentov)

PERIODICAL: Tr. Vses. n.-i. alyumin.-magn. in-ta, 1957, Nr 40, pp 302-306

ABSTRACT: The effect of Mg, Cu, and Zn content on the mechanical properties of high-strength Al alloys of the Al-Zn-Mg-Cu system was investigated. The alloys were cast by the Lavrov method into flat ingots which were then homogenized at 430°C and hot-rolled. The determination of the mechanical properties was performed after quenching from 450-470°C and aging for 24 hours at 120°C. The following conclusions are made: 1. At a given Zn content  $\sigma_b$  increases with an increase of the total Cu and Mg content. This increase is the most noticeable with up to 4% of Cu + Mg. 2. Upon a variation in the Cu to Mg ratio in the alloy at a given total Cu and Mg content the properties vary slightly. Nevertheless, the highest values for  $\sigma_b$  are obtained with %Cu/(%Cu + %Mg) = 20 - 40%. 3. No regularity was

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SOV/137-58-7-15909

Mechanical Properties of Al-Zn-Mg-Cu Alloys (cont.)

observed in the variations in  $\delta$  at a given Zn content. 4. An increase in Zn content from 6 to 10% is accompanied by an increase in  $\sigma_b$  and a decrease in  $\delta$ . At 10% Zn in certain cases  $\sigma_b$  attains 70 kg/mm<sup>2</sup> at 7%  $\delta$ .

N. R.

1. Aluminum alloys--Mechanical properties
2. Copper--Metallurgical effects
3. Manganese--Metallurgical effects
4. Zinc--Metallurgical effects

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137-58-6-13556

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 6, p 339 (USSR)

AUTHOR: Vorob'yev, G.M.

TITLE: Impact Strength of Aluminum Alloys of the Solid-solution Type  
(Udarnaya vyazkost' alyuminiyevykh splavov tipa tverdykh rastvorov)

PERIODICAL: Tr. Vses. n.-i. alyumin.-magn. in-ta, 1957, Nr 40, pp 294-301

ABSTRACT: Investigations were performed in order to determine the effect of the concentration of Cu, Mg, Zn, and  $Mg_2Si$  on the magnitude of  $a_k$  of the respective binary systems, as well as on the Al-Zn-Mg-Cu system (of the V95 type). All alloys were prepared on a high-purity Al base. It is shown that at increasing concentrations of alloying elements the  $a_k$  of binary systems increases, reaches a maximum at a definite concentration, and diminishes again. Microstructural investigations demonstrated that the maxima on the  $a_k$  graphs correspond to concentrations at which the given alloys are still composed of a single phase even though, according to the phase diagram, these concentrations are noticeably lower than the maximum solubility in Al of

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137-58-6-13556

# Impact Strength of Aluminum Alloys of the Solid-solution Type

any individual component. Experiments performed on complex alloys of the Al-Zn-Mg-Cu system, the component concentrations of which were varied in such a manner as to preserve a predetermined ratio between the components, confirmed the results obtained in experiments with binary systems, namely, that the character of the  $a_k$  curves is a function of the composition, both in the case of freshly-tempered alloys and in the case of alloys that have been tempered and allowed to age. The maxima on the  $a_k$  curves of tempered and aged alloys are displaced with respect to the axis of concentrations and correspond to specific concentrations of the products of decomposition of the respective solid solutions. It is shown that the  $a_k$  of Al-Cu alloys is more strongly affected by coarse two-phase regions, clearly identifiable under the microscope, than by structural changes brought about by the aging effect. In the case of the V95 alloy, structural changes caused by the aging process exert a decisive influence on the magnitude of the  $a_k$ .

E.K.

1. Aluminum alloys--Mechanical properties
2. Aluminum alloys--Phase studies
3. Aluminum alloys--Microstructure

Card 2/2

24.3000

77140  
SOV/148-59-9-10/22

AUTHOR: Vorob'yev, G. M. (Engineer)

TITLE: An Analysis of Changes of Intensity and Width of  
Roentgen Interference Lines of Fe-Co Alloys During  
Deformation

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Chernaya  
metallurgiya, 1959, Nr 9, pp 101-110 (USSR)

ABSTRACT: The article is an analysis of the mechanism of changes  
in intensity of interference lines of Fe-Co alloys on  
a supposition regarding the possibility of a joint  
effect of three factors: the distortions of type III,  
the effect of extinction, and the effect of no-par-  
ticipation of some part of metal (after deformation)  
in the diffraction of X-rays. Such a method permitted  
one to determine the value of distortions of type III  
in the presence of a strong effect of extinction.  
The chemical analysis of the tested samples is given  
in Table 1. The results of experiments are discussed.

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An Analysis of Changes of Intensity and Width  
of Roentgen Interference Lines of Fe-Co Alloys  
During Deformation

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SOV/148-59-9-10/22

Table 1  
% of Admixtures in Alloys Fe+Co by Weight

Alloys	Si	Cr	Mn	Co	Ni	Mo	W	C	Al	P	S
								Maximum			
Fe+1%Co	0,03	—	0,03	0,82	0,12	—	—	0,070	—	0,02	0,02
Fe+4%Co	0,03	—	0,04	4,30	0,11	—	—	0,037	—	0,02	0,02
Fe+6%Co	0,025	—	0,03	6,15	0,08	—	—	0,037	—	0,02	0,02
Fe+8%Co	0,035	—	0,04	7,96	0,12	—	—	0,037	—	0,02	0,02

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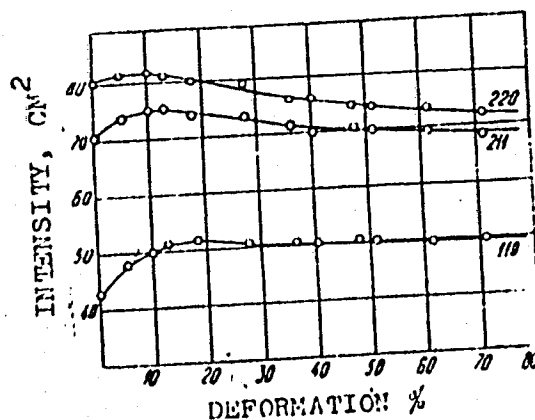
An Analysis of Changes of Intensity and Width  
of Roentgen Interference Lines of Fe-Co Alloys  
During Deformation

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SOV/148-59-9-10/22

The change in intensity of lines is given in Fig. 1.  
The increase of type III distortions with the increase

Fig. 1. Change of intensity  
of lines  $[110]$ ,  $[211]$ ,  
 $[221]$  during deformation  
of the alloy Fe + 4% Co.



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An Analysis of Changes of Intensity and Width  
of Roentgen Interference Lines of Fe-Co Alloys  
During Deformation

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SOV/148-59-9-10/22

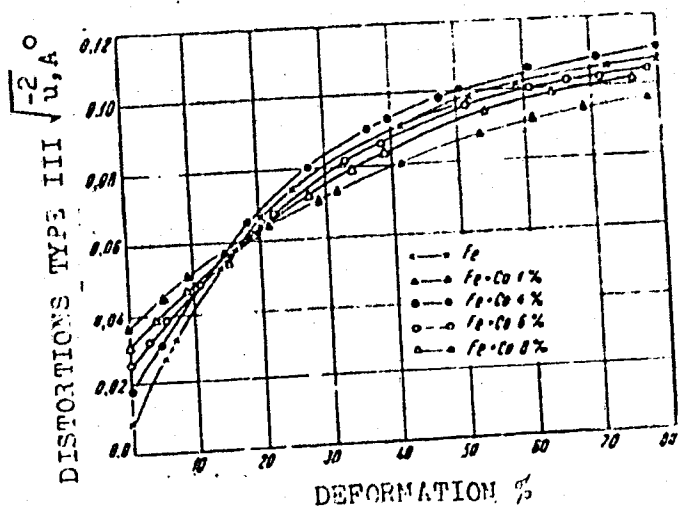
of the number of bent blocks and by the increase of the curvature of bending (see Fig. 2). The magnitude of distortions type II (see Fig. 5) indicates the ability of the blocks to sustain the elastic deformation. The author arrived at the following conclusions. (1) During plastic deformation of the alloys Fe-Co, the type III distortions increase over the whole investigated range of deformations. The most intensive increase of the type III distortions takes place during the compression from 0 to 20%. Together with the increase of the type III distortions, a fragmentation of blocks takes place which results in the decrease of the effect of extinction. Therefore, the increase of the degree of deformation from 0 to 15% causes the increase of intensity of lines because the increase of intensity, on account of the fragmentation of the blocks, exceeds the decrease caused by the type III distortion. (2) The percentage of the substance which does not participate in the diffraction of X-rays increases with the increase of the

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An Analysis of Changes of Intensity and Width  
of Roentgen Interference Lines of Fe-Co Alloys  
During Deformation

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SOV/148-59-9-10/22

Fig. 2. The relationship  
between the distortions  
of type III ( $\sqrt{u}^{-2}$ ) and  
the degree of plastic  
deformation.

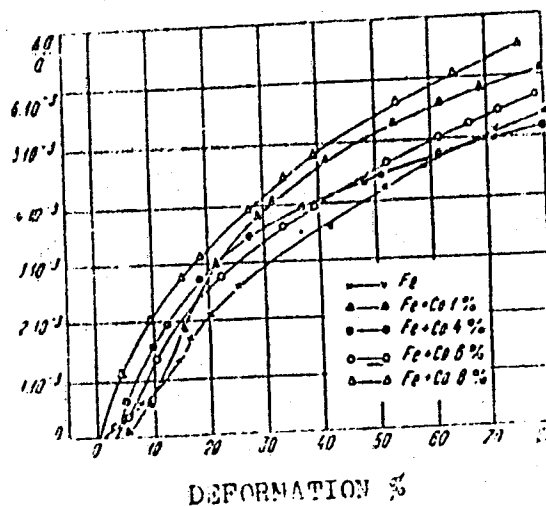


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An Analysis of Changes of Intensity and Width  
of Roentgen Interference Lines of Fe-Co Alloys  
During Deformation

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Fig. 5. Distortions of  
type II ( $4 \frac{\Delta a}{a}$ ) as a func-  
tion of the degree of plastic  
deformation.



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An Analysis of Changes of Intensity and Width of Roentgen Interference Lines of Fe-Co Alloys During Deformation, 77140 SOV/148-59-9-10/22

degree of deformation; furthermore, it increases most intensively in its initial stage. (3) The average size of the regions of coherent dispersion of X-rays, measured by the width of the lines, has a lower limit at the compression of about 20%. (4) The distortions of type II increase with the increase of deformation up to 80%, and the character of their changes is close to the character of changes in distortions of type III. There are 7 figures; 1 table; and 32 references, 22 Soviet, 5 U.K., 4 U.S., 1 Danish. The most recent U.K. references are: Williamson, G. K., and Smallman, R. E., Proceedings Phys. Soc., 68, 577, 1955; Weiss, R. I., Proceedings Phys. Soc., 65, 553, 1952; Bragg, W. L., Proc. Phil. Soc., 45, 125, 1949. The most recent U.S. references are: Ekstein, H., Phys. Revue, 83, 721, 1951; and Averbach, B. L. and Warren, B. E., J. Appl. Physic., 20, 1066, 1949.

ASSOCIATION: Dnepropetrovsk State University (Dnepropetrovskiy gosudarstvennyy universitet)  
SUBMITTED: April 20, 1959 Card 7/7

VOROB'YEV, G.M.; KHARLAMOVA, N.V.

Aluminum microstructure with varying silicon and iron contents.  
TSvet.met. 30 no.6:48-52 Je '57. (MLRA 10:7)

1. Vsesoyuznyy alyuminiyevy-magniyevyy institut.  
(Aluminum alloys--Metallography)

VOROB'YEV, G.M.

136-6-10/26

AUTHOR: Vorob'yev, G.M. and Kharlamova, N.V.

TITLE: Micro-structure of Aluminium with Different Silicon and Iron Contents. (Mikrostruktura alyuminiya pri razlichnom sodержanii kremniya i zheleza)

PERIODICAL: Tsvetnyye Metally, 1957, No.6, pp. 48 - 52 (USSR)

ABSTRACT: Little work has been done on the deleterious effect of silicon on the properties of aluminium and the considerable number of researches on the corresponding effect of iron have been mainly on such high-silicon and high-iron systems that the results are not entirely relevant to technical aluminium. In the present work the character of the structural components of the following alloys was studied by micro-structural examination (photo-micrographs are shown): Al - 2% Fe, Al - 2% Fe - 0.1% Si, Al - 1% Fe - 0.3% Si and Al - 0.3% Fe - 1% Si. The alloys were prepared by two methods: that of Lavrov and that of casting into chill moulds, from AV000 grade aluminium and Al-Fe and Al-Si alloys. The thin-walled ingot moulds used in the Lavrov dipping method were pre-heated to 500-550 °C, the chill moulds to 100-110 °C. In hyp-eutectic alloys without silicon a very fine eutectic structure was obtained. The structure coarsened as 0.1 to 0.3% silicon was added both to hypo- and also to hyper-eutectic alloys, partial or complete

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136-6-10/26

Micro-structure of Aluminium with Different Silicon and Iron Contents.

transformation of the eutectic into needle-like formations of the ferruginous component being obtained with the latter when chill-mould cast. All types of primary aluminium are hyper-eutectic (with respect to iron) and in these the fine eutectic structure is preserved when the iron content is > the silicon content; when the converse holds, the eutectic structure is lost and the iron-silicon component assumes the form of coarse needles situated at grain boundaries. The authors suggest that if these changes could explain the tendency of aluminium to hot-crack formation elements capable of modifying the structure of the second phase should be added. There are 6 figures and 3 Slavic references.

ASSOCIATION: VAMI

AVAILABLE: Library of Congress

Card 2/2



S/137/60/000/010/035/040  
A006/A001

Translation from: Referativnyy zhurnal, Metallurgiya, 1960, No.-10, p. 293,  
# 24800

AUTHOR: Vorob'yev, G.M.

TITLE: On the Method of Determining Distortions of the 2-nd Order and the  
Magnitudes of Mosaic Crystal Domains

PERIODICAL: Nauchn. zap. Dnepropetr. un-t, 1957, Vol. 72, pp. 71 - 77

TEXT: The article reports on the refinement of the approximation method  
when determining distortions of the 2nd order and the magnitudes of mosaic domains.  
The given method has been used when investigating the fine structure of deformed  
alloys of Fe with Co, Ni, Si and Cr. There are 13 references.

T.R.

Translator's note: This is the full translation of the original Russian abstract.

Card 1/1

VOROB'YEV, G.M.

Simplified design of the Madera harmonic analyzer. Zav.lab.  
28 no,6:741-742 '62. (MIRA 15:5)

1. Dnepropetrovskiy gosudarstvennyy universitet.  
(X rays—Diffraction)

L 10665-67 EMI(m)/EWP(t)/EMI, EWP(k) - IJP(c) JD/JH  
ACC NR: AP6029678 (A) SOURCE CODE: UR/0136/66/000/008/0092/0093 46

AUTHORS: Vorob'yev, G. M.; Maurits, I. I.

ORG: none

TITLE: Effect of re-smelting aluminum on the sodium content of the latter

SOURCE: Tsvetnyye metally, no. 8, 1966, 92-93

TOPIC TAGS: aluminum metallurgy, sodium, aluminum /A7 aluminum, A8 aluminum

ABSTRACT: The effect of re-smelting aluminum (under industrial conditions) on its sodium content was studied. The sodium content of the specimens was determined before and after re-smelting by flame photometry, and the experimental results are tabulated. It was found that re-smelting lowers the sodium concentration in the metal. The experimental results agree with the results of L. D. Margolis, Z. V. Yol'tsova, and I. A. Zhrebnoy (Tsvetnyye metally, 1964, No. 6), obtained under laboratory conditions. Orig. art. has: 1 table.

SUB CODE: 11/  
13/

SUBM DATE: none/

ORIG REF: 001/

OTH REF: 001

UDC: 669.71-154.9

Card 1/1

VOROB'YEV, G.N.

Determining efficient parameters for retractable landing gears of  
high-speed aircraft. Trudy KAI 29:69-88 '55. (MLBA 10:6)  
(Airplanes--Landing gear)

VOROB'YEV, G.P.

Settling-tank with mechanical sediment removal. Ognepory 26  
no. 4:193-194 '61. (MIRA 14:5)

1. Pervoural'skiy dinasovyy zavod.  
(Dust collectors)

ARSYUTKIN, N.V.; DANILENKO, S.P., Prinsipali uchastiye; CHERNIY, B.P.;  
KAZANTSEV, G.I.; KARASEV, N.N.; VOROB'YEV, G.P.

Automatic weighing of Dinas brick material. Ogneupory 25 no.11:497-  
499 '60. (MIRA 13:12)

1. Pervoural'skiy dinasovyy zavod.  
(Firebrick) (Weighing machines)

BOOK EXPLOITATION

S/

AM4027874

Vorob'yev, Grigoriy Abramovich; Mesyats, Gennadiy Andreyevich

Technique of high-voltage millimicrosecond pulse shaping (Tekhnika formirovaniye vy\*sokovol'tny\*kh nanosekundny\*kh impul'sov).  
Moscow, Gosatomizdat, 63. 0166 p. illus., biblio. 2,900 copies printed.

TOPIC TAGS: millimicrosecond pulses, nanosecond pulses, nanosecond pulse generation, nanosecond pulse shaping, discharges in gases, high voltage discharge, transient in discharge circuit, high voltage pulse front, high voltage pulse duration, nanosecond pulse generator, nanosecond pulse measurement

PURPOSE AND COVERAGE: This monograph is a first attempt at a systematic treatment of high-voltage nanosecond pulse shaping. A considerable portion of the book is based on original work by the authors, initiated in the High-voltage Laboratory of Tomskiy poli-

Card 1/3

AM4027874

tekhnicheskiiy institut (Tomsk Polytechnic Institutë) in 1957. The description of apparatus for production and transformation of high-voltage nanosecond pulses is preceded by an analysis of the main processes which occur in a spark, with inclusion of the theories of Weizel and Rompe and the theory of streamer discharge and transients in the discharge circuit. The book is intended for scientific workers and engineers of suitable specialization, and to students of higher educational institutions. Chs. I and V were written by the authors jointly, except for Sec. 1.2, which was written by Yu. P. Usov, and Sec. 5.8, which was written by G. A. Mesyats and V. V. Kremnev. Chs. II, III, and IV were written by G. A. Mesyats and Ch. VI by G. A. Vorob'yev.

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Ch. I. Some laws governing the breakdown of gases - - 5  
Ch. II. Analysis of processes in a discharge circuit with a  
switching discharge gap - - 29  
Ch. III. Methods of decreasing the duration of the front of a  
high-voltage pulse - - 38  
Ch. IV. Methods of obtaining and transforming pulses in devices  
with long lines - - 64  
Ch. V. Generators for high-voltage nanosecond pulses - - 82  
Ch. VI. Measurement of parameters of high-voltage nanosecond  
pulses - - 130  
Literature - - 162

SUB CODE: GE, SP

SUBMITTED: 08Oct63

NR REF SOV: 082

OTHER: 068

DATE ACQ: 20Mar64

Card 3/3

BARTENEV, Igor' Aleksandrovich, kand. arkhitektury; IKONNIKOV, A.V.,  
kand. arkhitektury, red.; MEDERSKIY, L.A., starshiy nauchnyy  
sotr., red.; PILYAVSKIY, V.I., doktor arkhitektury, nauchnyy  
red.; VOROB'YEV, G.S., red.; GURDZHIYEVA, A.M., tekhn. red.

[Paris] Parizh. Leningrad, Ob-vo po rasprostraneniu polit. i  
nauchn. znani RSFSR, 1962. 65 p. (MIRA 16:3)  
(Paris--Description)

KOZHEVNIKOV, Petr Vasil'yevich, prof.; ARKHANGEL'SKIY, S.P., prof.,  
nauchnyy red.; VOROB'YEV, G.S., red.; PETROVA, M.P., tekhn.  
red.

[Prevention and treatment of skin diseases] Profilaktika i lechenie  
kozhnykh boleznei. Leningrad, Ob-vo po rasprostraneniю polit. i  
nauchn. znaniy RSFSR, 1962. 57 p. (MIRA 15:6)

1. Chlen-korrespondent Akademii meditsinskikh nauk SSSR (for  
Kozhevnikov).

(SKIN---DISEASES)

KOSMODINSKIY, Vladimir Nikolayevich; KASHKIN, P.N., prof., nauchnyy  
red.; VOROB'YEV, G.S., red.; GUDZHIYEVA, A.M., tekhn. red.

[Riddles of life of the world of the invisible] Zagadki zhizni  
mira nevidimyykh. Leningrad, Ob-vo po rasprostraneniю polit.  
i nauchn. znaniy RSFSR, 1962. 52 p. (MIRA 15:12)  
(MICRO-ORGANISMS)

YELKIN, Vladimir Ivanovich; RAGOZIN, I.I., prof., nauchnyy red.;  
VOROB'YEV, G.S., red.; GURDZHIYEVA, A.M., tekhn. red.

[Human diseases caused by domestic animals; prevention and  
control] Bolezni liudei, vyzyvaemye domashnimi zhivotnymi;  
profilaktika i mery bor'by. Leningrad, Ob-vo po rasprostra-  
neniiu polit. i nauchn. znaniy RSFSR, 1962. 39 p.  
(MIRA 15:8)

(COMMUNICABLE DISEASES--PREVENTION)  
(ANIMALS AS CARRIERS OF DISEASE)

SHCHERBAKOV, V.K., doktor tekhn. nauk, prof.; VOROB'YEV, G.V., kand.  
tekhn. nauk; OL'SHEVSKIY, O.V., kand. tekhn. nauk

Economic effectiveness of three-phase superhigh tension power  
transmission systems. Izv. vys. ucheb. zav.; energ. 9 no.1:  
99-102 Ja '66. (MIRA 19:1)

1. Sibirskiy nauchno-issledovatel'skiy institut energetiki.  
Submitted July 28, 1965.

VOROB'YEV, G.V.

~~VOROB'YEV, G.V.~~

Relation of the teaching of geometry in the sixth and seventh  
grades to technical education. Politekh.obuch.no.12:42-47 D '57.  
(MIRA 10:12)

(Geometry--Study and teaching) (Technical education)

S/137/61/000/005/001/060  
A006/A106

24.7700

AUTHORS: Karpachev, S.V., Vorob'yev, G.V.

TITLE: Electric conductivity of molten carbonates of alkaline metals. I.  
The  $\text{Na}_2\text{CO}_3$  -  $\text{K}_2\text{CO}_3$  system

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 5, 1961, 8, abstract 5A55  
("Tr.in-ta elektrokhimii. Ural'skiy fil. AN SSSR", 1960, no. 1,  
61 - 64)

TEXT: The authors studied the temperature dependence of specific electric conductivity in the system of molten salts  $\text{Na}_2\text{CO}_3$  -  $\text{K}_2\text{CO}_3$  on the whole composition range. Within a wide temperature range the specific electric conductivity increases monotonously from pure  $\text{K}_2\text{CO}_3$  to pure  $\text{Na}_2\text{CO}_3$ . A fully distinct minimum, corresponding to the composition of 50 mole %  $\text{Na}_2\text{CO}_3$ , is observed on the curve describing the dependence of the equivalent electric conductivity on the composition. This proves the chemical interaction between the components of the melt.

[Abstracter's note: Complete translation]

T. K.

Card 1/1



VOROB'YEV, G.V.; PAL'GUYEV, S.F.; KARIACHEV, S.V.

Viscosity of molten alkali metal carbonates. Trudy Inst.  
elektrokhim. UFAN SSSR no.6:39-45 '65. (MIRA 12:11)

L 10243-66 EWT(1)/EWA(h)

ACC NR: AP6002409

SOURCE CODE: UR/0105/64/000/010/0031/0036

AUTHOR: <sup>55</sup>Shcherbakov, V. K. (Novosibirsk); <sup>55</sup>Putilova, A. T. (Novosibirsk); Kopach, Ye. N. (Novosibirsk); <sup>55</sup>Vorob'yev, G. V. (Novosibirsk)

ORG: none

TITLE: Power takeoff from half-wave transmission lines <sup>55</sup>

SOURCE: Elektrichestvo, no. 10, 1964, 31-36

TOPIC TAGS: electric power production, transmission line

ABSTRACT: The half-wave homogeneous lines considered are 1500 to 3000 km. in length, and the problems involved in taking off power in parallel or in series at various points in the line are analyzed in detail. Line voltage stability improves as the pick-off points are moved closer to the ends of a half-wave line. Within 1/5 the line length from the ends, parallel transformer-type power take-off is adapted easily whereas series coupling is better toward the center. The equivalent circuit and voltage distribution curves are shown for the line for parallel-transformer power take-off near the ends of the line and for series transformer take-off toward the center. Experiments and calculations show that when power take-off is 20% of the natural power or less, parallel unified intermediate systems coupled toward the line ends are stable, whereas series take-offs are

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UDC: 621.315.05

I. 10243-66

ACC NR: AP6002409

stable toward the center of the line under the same conditions. At the line center an intermediate system is practically independent of the line mode and stability. A combined parallel-series transformer take-off may be used over the entire line with stable operation, and by careful selection of parameters, intermediate parallel-series systems can be decoupled from the line modes at the center of the line. Orig. art. has: 16 figures, 1 table, 11 formulas. [JPRS]

SUB CODE: 09 / SUBM DATE: 17Mar64 / ORIG REF: 020

Card <sup>1</sup>2/2

S/631/60/000/001/009/014  
B110/B102

AUTHORS: Karpachev, S. V., Vorob'yev, G. V.

TITLE: Electrical conductivity of molten alkali-metal carbonates.  
I. The system  $\text{Na}_2\text{CO}_3\text{-K}_2\text{CO}_3$

SOURCE: Elektrokhimiya rasplavlennykh solevykh i tverdykh elektrolitov,  
no. 1, 1960, 61 - 64

TEXT: The authors studied the electrical conductivity of molten carbonates of the system  $\text{Na}_2\text{CO}_3\text{-K}_2\text{CO}_3$  between 700 and 1000°C. The end of an alundum tube (inner diameter: ~0.4 cm; wall thickness: 0.15 - 0.20 cm) was provided with cylindrical Pt electrodes with a surface area of ~0.5 cm<sup>2</sup>. 0.5-mm Pt wires were used for current supply. At an electrode spacing of 4.0 - 5.0 cm, a 40 - 50 cm<sup>-1</sup> cell was obtained, which was set by screws to an immersion depth of the upper electrode of 0.5 cm. The measuring arrangement consisted of an a-c bridge and a cathode-ray oscilloscope which was used as zero indicator. The conductivity was measured between 1000 - 5000 cps. The results were extrapolated to infinite frequency;

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S/631/60/000/001/009/014  
B110/B102

Electrical conductivity of...

$R = g(1/\sqrt{f})$  ( $R$  = resistance,  $f$  = a-c frequency) is linear. The alundum tube remained unchanged during 8-hr melting of  $\text{Na}_2\text{CO}_3$  and  $\text{K}_2\text{CO}_3$  at  $900^\circ\text{C}$  in a  $\text{CO}_2$  atmosphere. The crucible with the alundum tube containing the melt was put into a metal block and then heated. The temperature was measured with a Pt-PtRh thermocouple. The temperature was kept constant with an accuracy of  $1 - 2^\circ\text{C}$  (measuring error,  $\pm 3\%$ ). The temperature dependences of the electrical conductivities are straight lines which are almost parallel, since the temperature coefficients of the conductivity of pure, molten  $\text{Na}_2\text{CO}_3$  and  $\text{K}_2\text{CO}_3$  are similar. The curve of conductivity versus composition first ascends slowly when  $\text{Na}_2\text{CO}_3$  is added (with 40 - 45% of  $\text{Na}_2\text{CO}_3$   $\sigma$  has changed only by 4%) and then rapidly up to the value of pure  $\text{Na}_2\text{CO}_3$ . The dependence of equivalent conductivity on composition is more complex: on melting with 50 mole% of  $\text{Na}_2\text{CO}_3$  a distinct minimum is observed. This indicates that the interaction between  $\text{Na}_2\text{CO}_3$  and  $\text{K}_2\text{CO}_3$  in melts reduces the conductivity and causes a density maximum at 45 mole%.

Card 2/3

Electrical conductivity of...

S/631/60/000/001/009/014  
B110/B102

of  $K_2CO_3$ . There are 2 figures and 7 references: 1 Soviet and 6 non-Soviet. The three references to English-language publications read as follows: E. Gorin, H. L. Recht. Amer. Soc. Mech. Engrs, 1958, A-200; A. Reisman. J. Amer. Chem. Soc., 81, 807, 1959; E. R. Van Artsdalen, J. S. Yaffe. J. Phys. Chem., 59, 118, 1955.

Card 3/3

SHCHERBAKOV, V.K. (Novosibirsk); PUTILOVA, A.T. (Novosibirsk); KOPACH,  
Ye.N. (Novosibirsk); VOROB'YEV, G.V. (Novosibirsk)

Power takeoff from half-wave tuned power transmission lines.  
Elektrichestvo no.10:31-36 0 '64. (MIRA 17:12)

VGROB'YEV, G.V.

Some characteristics of series-parallel coupling networks of intermediate power systems with long-distance power transmission lines.  
Trudy Sib. nauch.-issl. inst. energ. no.1:24-39 '64. (MIRA 18:5)



SHCHERBAKOV, V.K.; PUTILOVA, A.T.; KOPACH, Ye.N.; VOROB'YEV, G.V.

Joint operation of tuned power transmission lines with intermediate systems. Trudy Sib. nauch.-issl. inst. energ. no.1:  
40-44 '64. (MIRA 13'5)

SHCHERBAKOV, V.K.; VOROB'YEV, G.V.; Primal uchastiye: SKOBELIN, B.N.

Longitudinal-transverse system of power takeoff from tuned electric  
transmission lines. Izv. Sib. otd. AN SSSR no. 11:18-32 '62.  
(MIRA 17:9)

KARPACHEV, S.V.; VOROB'YEV, G.V.

Electric conductance of fused alkali metal carbonates. Trudy  
Inst.elektrokhim.UFAN SSSR no.1:61-64 '60. (MIRA 15:2)  
(Alkali metal carbonates—Electric properties)

YAKOVLEV, Fedor Ivanovich; KIRYUSHKIN, Dmitriy Maksimovich;  
VOROB'YEV, Gennadiy Vasil'yevich; KULIKOV, V.N., red.;  
POLUKARPOVA, Ye.K., tekhn. red.

[Laboratory practice for students] Laboratorno-prakticheskie raboty uchashchikhsia. Moskva, Izd-vo APN RSFSR, 1963.  
229 p. (MIRA 16:8)

(Science--Problems, exercises, etc.)

VOROB'YEV, G.V.

Study of the stability of a generator with strong angle regulation  
feeding a long-distance power transmission line. Trudy Transp. -  
energ. inst. Sib. otd. AN SSSR no.11:135-147 '60. (MIRA 14:6)  
(Electric power distribution) (Electric generators)

VOROB'YEV, G.V.

Voltage mode of an electric power transmission system with series-parallel intermediate taps. Trudy Transp.-energ. inst. Sib. otd.  
AN SSSR no.16:22-30 '63. (MIRA 16:11)

VOROB'YEV, G.V.

Role of geometry in engineering. Mat. v shkole no.3:51-61  
My-Je '59. (MIRA 12:9)  
(Geometry)

VOROB'YEV, G.V. (Moscow)

Geometry teaching methods in grades 6 and 7. Mat. v shkole  
no.3:36-42 My-Je '58.

(MIRA 11:5)

(Geometry--Study and teaching)



VOROB'YEV, G.V.

LAVRUKHIN, G.M.; VOROB'YEV, G.V.

Instrument for determining the fuel consumption of an automobile.  
Avt.trakt.prom. no.10:30-32 0 '54. (MLRA 7:10)

1. Nauchnyy avtomotorny institut.  
(Automobiles--Fuel consumption)

VOROB'YEV, G.V.

Stability of the parallel operation of long-range electro-  
transmission with series-parallel intermediate connections.  
Izv. SO AN SSSR no.6 Ser. tekhn. nauk no.2:16-24 '64.

(MIRA 17:10)

1. Sibirskiy nauchno-issledovatel'skiy institut energetiki,  
Novosibirsk.

VOROB'YEV, I., polkovnik

The company repulses an attack. Voenn. znaniye no.8:11-12  
Ag '64. (MIRA 17:11)

VOROB'YEV, I. [Vorob'ov, I.]

Synthetic coffee. Znan.ta pratsia no.1:24 Ja '60.  
(MIRA 13:5)

(United States--Food substitutes) (Coffee)

VOROB'YEV, I. P. KHAZHATRYAN, G., inzhener.

Specialization of enterprises. Stroil. mat., idzel. 1 konstr. 2 no.  
7:9-12 J1 '56. (MLBA 9:10)

1. Direktor Moskovskogo zavoda shlakoblokov No. 21 (for Vorob'yev).  
(Moscow--Reinforced concrete construction)

VOROB'YEV, I.; KHACHATARYAN, G.

Mass production of large slag blocks for housing construction.  
Stroi. mat. 4 no.2:7-10 F '58. (MIRA 11:2)

1. Direktor zavoda No.21 Glavmoszhellobetona (for Vorob'yev)
2. Glavnyy inzhener zavoda No.21 Glavmoszheleobetona (for Khachataryan)  
(Moscow--Concrete blocks)

FRANTOV, A.; VOROB'YEV, I.

The story of Stepan Kozak, Sov. profsoiuzy 7 no. 7:53-55 J1 '58.  
(MIRA 11:8)

(Kozak, Stepan Stepanovich)

*Vorob'yev, I.*

SMIRNOV, K. (Ivanova); SANAMYAN, S. (Baku); VOROB'YEV, I. (L'vov); KOVSHAROV, I.  
(Khadyzhensk, Krasnodarskiy kray).

Visual methods of teaching are pledge of success. Pozh. delo 4 no.5:  
10-12 My '58. (MIRA 11:5)

(Fire prevention--Study and teaching)



VOROB'YEV, I.; PISAREV, Yu. (Kuybyshev)

Building up an outstanding brigade. Pesh.delo 5 no.8:19-20  
Ag '59. (MIRA 12:12)  
(Kuybyshev--Communist education)

VOROB'YEV, I. [Vorobiov, I.]

Esperanto, an international language. Znan. ta pratsia no.8:24  
Ag '59. (MIRA 13:2)

(Esperanto)

VOROB'YEV, I.

Revmatizm (Rheumatism) (Paper edition)

150 p. 50¢

SO: Four Continent Book List, April 1954

VOROB'YEV, I.,

Action of an antiaircraft battery on the march. Voen. vest. 39  
no. 7:75-77 JI '60. (MIRA 14:2)  
(Antiaircraft guns)

VOROB'YEV, I., polkovnik; KIRYUKHIN, M., kapitan

Training in firing at aerial targets. Voen. vest. 40 no. 3:86-  
90 Mr '61. (MIRA 14:2)

(Antiaircraft artillery)

VOROB'YEV, I., polkovnik

Battle in the "Narrow" defile. Starsh.-serzh. no.8:14-15 Ag '62.  
(HIFA 15:8)

(Mountain warfare)

VOROB'YEV, I. [Vorobyov, I.], kand.filosof.nauk

From an all-people's state to a public self-government. Nauka 1  
zhyttia 11 no.3:29-31 Mr '62. (MIRA 15:8)  
(Russia--Politics and government)

VOROB'YEV, I.

Subject : USSR/Aeronautics AID P - 2438  
Card 1/1 Pub. 135 - 4/19  
Author : Vorob'yev, I., Lt. Col.  
Title : ~~XXXXXXXXXXXXXXXXXXXX~~ Radar method of determination of bombing results  
Periodical : Vest. vozd. flota, 8, 19-25, Ag 1955  
Abstract : The author is concerned with the changes in the conditions of practice bombing due to the increased speed and altitude of contemporary aircraft. He describes a method of determination of bombing results by radar and discusses in particular: a) radial deflection of the bomb, b) the indicator of the location of the bomb explosion, c) the follow-up indicator, d) the firing ground chart. Diagrams.  
Institution: None  
Submitted : No date



L 04483-67 EWT(1)/ENT(m) RO

ACC NR: AN6006608 (A,N) SOURCE CODE: UR/9008/65/000/265/0002/0003

AUTHOR: Vorob'yev, I. (Colonel, Candidate of Military Sciences, Docent)

ORG: none

TITLE: Firepower in modern offensive warfare

SOURCE: Krasnaya zvezda, no. 265, 1965, p. 2, col. 3-7; p. 3. col. 1-5

TOPIC TAGS: nuclear warfare, nuclear warfare training, tactical warfare, air defense system, defense installation, air to ground attack, ground force tactic

ABSTRACT: The author discusses problems concerning the defeat of the enemy by firepower in modern warfare. Nuclear and conventional airpower and artillery strikes are used to inflict a decisive defeat upon an enemy in offensive battles. This is achieved by strikes, directed primarily against the enemy's nuclear installations, his most important groupings, and also against targets which are directly in the line of advance of friendly subunits. Combatting the enemy's nuclear weapons is the main goal in the fighting for superiority in firepower under modern combat conditions. The basic task of attaining the superiority in firepower will be assigned to nuclear rocket weapons. The capability of the air force to seek and destroy a target and to strike mobile and small targets in the deep rear of the enemy give it wide range in

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L 04483-57

ACC NR: AN6006608

achieving superiority in firepower. Artillery is also a highly effective means of fighting against the enemy's nuclear weapons. Motorized rifle subunits and tanks moving swiftly deep in the enemy's rear lines can result in capture or destruction of launch sites and prevent nuclear counterblows. Airborne subunits can carry out surprise attacks against enemy bases, control post, and directly against nuclear installations. The struggle against small nuclear weapons is very important under conditions of modern warfare. The effectiveness of nuclear and artillery strikes and the ultimate outcome of the struggle for superiority in firepower will depend, to a great degree, on the speed with which the troops are capable of taking advantage of the effects of supporting nuclear and artillery strikes. [NT]

SUB CODE: 15/ SUBM DATE: none

Cord

2/2

*egh*

VOLZHENSKIY, A.V., laureat Leninskoy premii, prof., doktor tekhn.nauk;  
VOROB'YEV, I.A.; GLADKIKH, K.V., inzh.; VINOGRADOV, B.N., inzh.;  
IL'YENKO, I.A., inzh.

Use of binding materials made of granulated fuel slag for the  
manufacture of wall materials. Stroil. mat. 8 no.5:5-8 My '62.  
(MIRA 15:7)

1. Direktor zavoda stenovykh blokov No.21 Glavnogo upravleniya  
promyshlennosti stroitel'nykh materialov pri ispolnitel'nom  
komitete Moskovskogo gorodskogo Soveta deputatov trudyashchikhsya  
(for Vorob'yev).

(Slag)  
(Building materials)

VOROB'YEV, I.A.; RYAZANTSEVA, L.I., red. izd-va; KOROBEKOVA, N.I.,  
tekhn. red.

[Tables for computing volumes of fill and excavation in intermediate and complete squares with 20x20 m. and 40x40 m. sides]  
Tablitsy podscheta ob'emov nasypei i vyemok v perekhodnykh i polnykh kvadratakh so storonami 20x20 m i 40x40 m. Moskva, Gosstroizdat, 1962. 167 p. (MIRA 16:1)  
(Earthwork--Tables, calculations, etc.)

VOROB'YEV, I.A., inzh.; SEMENOV, L.A., inzh.; SMOLYAKOV, A.N., inzh.

Vibration of centrifugal pipe-casting machines.  
Mashinostroenie no.4:91-92 J1-Ag '64.

(MIRA 17:10)

KORYBEVA, Z.S., kand. tekhn. nauk; VOROB'YEV, I.A., inzh.; MAKAROV, I.A.,  
inzh.; YAKHONTOVA, N.Ye., inzh.

Monolithic polystyrene plastic foams in construction. Stroi. mat. 11  
no.5:30-31 My '65. (MIRA 18:9)

STRAMENTOV, A. Ye., prof., doktor tekhn. nauk; VOROB'YEV, I.A., insh.

Reconstruction of the circumferential main highway Sadovoye Kol'tso.  
Gor. khoz. Mosk. 32 no.10:15-21 O '58. (MIRA 11:11)

1. Chlen-korrespondent Akademii stroitel'stva i arkhitektury SSSR.  
(Moscow--Roads)

VOROB'YEV, I.F....prof.

Iridectomy ab externo in glaucoma. Oft.zhur. 13 no.2:103-106 '58.  
(MIRA 11:4)

1. Iz kafedry glaznykh bolezney Saratovskogo meditsinskogo instituta.  
(IRIDECTOMY) (GLAUCOMA)



VOROB'YEV, I.F., professor

Penicillin treatment for perforating wounds of the eyes, complicated by pyogenic infection. Oft.shur. 11 no.1:24-26 '56. (MLRA 9:9)

1. Iz kliniki glaznykh bolezney Saratovskogo meditsinskogo instituta.  
(PENICILLIN) (EYE--WOUNDS AND INJURIES)

VOROB'YEV, I.E., aspirant; SHVABE, A.K., nauchnyy rukovoditel', kand.  
sel'skokh. nauk

Meat quality of White and Black cattle and its crosses with  
beef cattle. Izv. TSKHA no.1:101-109 '63. (MIRA 16:7)

(Beef cattle)

VOROB'EV, I. I.

Jack/prospecting - Equipment  
Drilling machinery

Mar/Apr 1947

"GP-1 Machine for Prospecting by Subterranean  
Drilling," I. I. Vorob'ev, 8 pp

"Razvedka Nedr" Vol XIII, No 2

Gives two photographs and three cross sections  
of the machine, with tables of descriptive and  
operating data. Discusses technical characteristics,  
installation, etc.

14T75

Cand Tech Sci

Dissertation: "Investigation of Progressive-Type Transmissions."

16/6/50

Moscow Automechanical Inst.

SO Vecheryaya Moskva  
Sum 71

333

Popuavtomaticheskoye Prispособleniye Dlya Frezerovaniya Profil'nykh  
Vintovykh Poverkhnostey Lopatok Tsilindricheskoy Frezoy. M.-L., Mashiz,  
(Leningr. Otd-nive), 1954. 30s. 3 Chert. 22 SM. (M-vo Trazhelogo  
Mashinostroyeniya SSSR. Nevskiy Mashinostroit. Ordena Trud. Krasnogo  
Znameni Zavod Im. V. I. Lenina. Byaro Tekhn. Informatsii. Tekhn.  
Informatsiya. 4) 1.000 Ekz. Baspl.--Na Obl. Avt. Ne Ukazany.--(54-14496zh)

621.914.2+621.914.2

SO: Knizhnaya, Letopis, Vol. 1, 1956

VOROB'YEV, I.I.

Gear pump for water flushing of wells during underground boring.  
Razved.i okhr.nedr 22 no.5:49-52 My '56. (MLRA 9:9)

1. Nauchno-issledovatel'skiy geologorazvedochnyy institut po  
zolotu.

(Boring) (Pumping machinery)

SOKOLOVSKAYA, F.M.; VOROB'YEV, I.I.

Dimension and parameters of flat cogged belts. Kauch. i rez.  
23 no.10:32-36 0 '64. (MIRA 18:2)

1. Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti.

SOV/121-58-10-1/25

AUTHOR: Vorob'yev, I.I.

TITLE: A Variable Speed Transmission With a Broad V-Belt  
(Variator s shirokim klinovym remnem)

PERIODICAL: Stanki i Instrument, 1958, Nr 10, pp 1-6 (USSR)

ABSTRACT: A variable speed V-belt transmission unit developed by ENIMS in co-operation with the Sverdlovsk Works for Industrial Rubber Goods (Sverdlovskiy zavod rezinovykh tekhnicheskikh izdeliy), incorporating a broad belt of 70 x 20 mm cross-section and 1500 mm length is described. The working principle is incorporated in many well-known commercially available units using pulleys of adjustable width. The belt design is illustrated in detail, showing belts with rubber teeth on the inside and open V-flanks or with teeth on the outside and covered flanks. The latter is of cambered cross-section. The toothed layer serves to stiffen the cross-section transversally, without increasing the minimum longitudinal bending radius which has a value of 7.5 belt thicknesses. The transmission design, rated 7 kw, is shown in several cross-sections. The unit features a remotely controlled

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SOV/121-58-10-1/25

A Variable Speed Transmission With a Broad V-Belt

speed adjustment by a 180 w, 1400 rpm motor through a worm transmission. The worm has a tapped hole and its rotation displaces a screw which actuates the pulley width control. A test rig is described and test results are shown in graphs of temperature against time under specified conditions. 700 hours have been run on the test rig. Measured efficiencies range from 88% at 1000 output rpm to 80% at 3000 output rpm. (both at 1440 input rpm). The performance limits for different belts are discussed. The range of speeds variation reaches 5 in all belts with teeth and 3.5 without teeth. Pulley faces with circular arc

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SOV/121-58-10-1/25

A Variable Speed Transmission With a Broad V-Belt

contours yield better conditions of operation.  
Table 3 shows maximum powers transmitted by belts of  
various sections. There are 9 illustrations including  
3 graphs, 1 photo and 4 tables.

Card 3/3

VOROB'YEV, I.I., inzh.

Machining and testing of "Christmas tree" roots of gas-turbine blades at the V.I. Lenin Neva Machinery Plant. Energomashinstroenie 4 no.11:35-38 N '58. (MIRA 11:11)  
(Gas turbines)

50V/122-59-4-6/28

AUTHORS: Sokolovskaya, F.M., and Vorob'yev, I.I.,  
Candidates of Technical Sciences

TITLE: A Series of Broad V-Belts for Infinitely Variable Speed  
Transmission (Ryad shirokikh klinovykh remney dlya  
variatorov)

PERIODICAL: Vestnik Mashinostroyeniya, 1959, Nr 4, pp 32-33 (USSR)

ABSTRACT: The advantages in variable speed drives of V-belts with  
a width to thickness ratio greatly exceeding standard  
V-belt sections consist of an increased control range  
and reduced size of the transmission. The necessary  
transverse stiffness is obtained by transverse teeth.  
Those with teeth on the tension side are better mainly  
because they can be made with wrapped side surfaces. A  
series of broad belts with and without teeth has been  
provisionally standardized by the Nauchno-Issledovatel'-  
skiy Institut Rezinovoy Promyshlennosti (NIIRP)  
(Scientific Research Institute of the Rubber Industry)  
together with the Eksperimental'nyy Nauchno-Issledovatel'-  
skiy Institut Metalloreshushchikh Stankov (ENIMS)  
Card 1/2 (Experimental Scientific Research Institute for Metal  
Cutting Machine Tools). The wedge angle of all belts